

AMENDMENTS TO THE CLAIMS

1-159. (Canceled)

160. (Currently amended) An array of transfected eukaryotic cells comprising a surface having an array of at least 96 locations, said array having a density of at least 100 locations per square centimeter, wherein each location comprises eukaryotic cells that are transfected with one or more defined nucleic acid molecules.

161. (Previously Presented) The array of claim 160, wherein the one or more defined nucleic acid molecules are non-viral.

162. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules are contained in a vector.

163. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules are expressed in the eukaryotic cells.

164. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules encode polypeptides that are expressed in the eukaryotic cells.

165. (Previously Presented) The array of claim 160, wherein the cells are disposed on the surface at a density of $0.3 \times 10^5/\text{cm}^2$ to $3.0 \times 10^5/\text{cm}^2$.

166. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules are DNA.

167. (Previously Presented) The array of claim 160, wherein, in at least one location, the eukaryotic cells are transfected with at least two different nucleic acid molecules.

168. (Previously Presented) The array of claim 160, wherein the locations have a density of at least 1000 different locations per square centimeter.

169. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 10,000 different locations per square centimeter.

170. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 100,000 different locations per square centimeter.

171. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 400 different locations per square centimeter.

172. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 700 different locations per square centimeter.

173. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 289 different locations per square centimeter.

174. (Previously Presented) The array of claim 168, wherein the locations have a density of at least 625 different locations per square centimeter.

175. (Previously Presented) The array of any of claims 160 and 168-174, wherein the locations have a density of at most 1,000,000 different locations per square centimeter.

176. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules encode a double-stranded RNA molecule.

177. (Previously Presented) The array of claim 160, wherein, in at least one location, the one or more defined nucleic acid molecules has a modified base or backbone.

178-236. (Canceled)

237. (New) The array of claim 160, wherein said defined nucleic acid molecules comprises at least 10 different sequences.

238. (New) The array of claim 237, wherein said defined nucleic acid molecules comprises at least 100 different sequences.

239. (New) The array of claim 238, wherein said defined nucleic acid molecules comprises at least 1000 different sequences.

240. (New) The array claim 160, said array comprising locations in which eukaryotic cells are co-transfected with two or more different defined nucleic acid molecules.